

**ABSTRACT**

**"A method and apparatus for transmitting data from an analogue modem to a digital modem through an analogue channel"**

- 5 A method for transmitting data through an analogue channel (4) from an analogue modem (2) to a digital modem (3) comprises encoding data inputted to the analogue modem (2). An encoder (6) encodes data inputted into the analogue modem (2) into corresponding constellation points (9) of a one-dimensional constellation (8). During initial handshaking a microprocessor (12) in the digital modem (3) computes the
- 10 constellation points (9) of the constellation (8) so that mid points (15) between adjacent constellation points (9) coincide with mid points (14) between adjacent codec levels (10). The computed constellation points (9) of the constellation (8) are transmitted along with the value of the largest constellation point (9) and its corresponding codec level (10) to the analogue modem (2). By selecting the mid
- 15 points (15) between the constellation points (9) to correspond with mid points (14) between adjacent codec levels (10) the noise margin is significantly enhanced.

Figs. 1 and 3 to accompany the abstract.